Remarks

Applicants respectfully request reconsideration of the application in view of the foregoing amendments and following remarks.

With entry of this amendment, claims 1-8 and 10-49 remain pending.

Initialed Form 1449's

Applicant thanks the Examiner for providing initialed Form 1449's for the Information Disclosure Statements filed in the application. The Examiner has crossed out one reference on the form 1449, German patent application 4133460 A1 to Blonstein. The reference is in German. Applicant is including a copy of a translation of the bulk of this reference, U.S. Patent 5,319,724, with the reply and respectfully asks Examiner to review it, as per the procedure described at 37 CFR §1.98(a)(3)(ii). Applicant is also enclosing a copy of the original form 1449 containing this reference, for the Examiner's convenience.

Claim Rejections Under 35 USC § 112

The action rejects claims 1-8 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Examiner objects to the terms "small window size," "large window size" and "intermediate window size." Applicant has amended the application to replace those terms with "**first** window size," "**second** window size" and "**third** window size." Each of these terms are not relative, and thus do not render the claims indefinite. Thus, claims 1-8 are now in condition for allowance.

Claim Rejections Under 35 USC § 101

The action rejects claims 10-49 under 35 USC § 101 as directed to non-statutory subject matter.

Claims 10-49

Claims 10-49 are directed to computer implemented methods. "A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under

35 U.S.C. § 101." *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts. *See*, MPEP § 2106(IV)(B)(2)(b) quoting *Diamond v. Diehr*, 450 U.S. at 183-84 (1981).

Applicants feel that the claims are statutory as they now stand. The examiner indicates that "claims directed to speech or audio signal processing would be considered to be statutory subject matter" [Action, Page 3.] Applicants respectfully point out that at least some of the claims are so directed. For example, claims 11, 13-15, 19, and 27 disclose "a method of adaptively selecting transform window size for **audio** signal processing." Claim 34 discloses "A program storage medium having a transform coding program executable on an **audio** processing device." Claim 42 discloses "A data carrying medium having a transform coded signal carried thereon for **audio** signal processing."

Furthermore, the signals by themselves correspond to physical objects or activities external to the computer system, and, therefore, are statutory. In *Arrythmia*, the court held that "transform[ing] a particular input signal to a different output signal, in accordance with the internal structure of the computer as configured by electronic instructions" was statutory, as "the claimed invention ... converts one physical thing [the original input signal] into another physical thing [the transformed input signal] just as any other electrical circuitry would do." [*Arrythmia*, 958 F.2d 1053, 1059.]

In re Alappat deals with an input signal which is sampled and digitized to provide a smooth waveform data sequence. This signal is determined to be statutory. *In re Alappat*, 33 F.3d 1531, 1538. *Alappat* distinguishes between patentable and unpatentable subject matter by determining if the claimed matter is "'so abstract and sweeping' that it would 'wholly pre-empt' the use of any apparatus employing the combination of mathematical calculations recited therein." *In re Alappat*, 33 F.3d at 1545. The *Alappat* court finds that the recitation of a "rasterizer" in the preamble limits the claims such that they do not "wholly pre-empt" the use of the mathematical calculations. *See Alappat*, 31 USPQ2d at 1558.

Applicants claims share the same features as the claims in both *Arrythmia* and *Alappat* that made them statutory. First, the claims of *Alappat* and *Arrythmia* like those of the current

application, refer to signal processing. For example, claim 10 recites: "detecting locations of transients in an input signal." The input signal of claim 10, as specifically stated by the *Alappat* court is physical. The detection of the location of the transients in claim 10 reinforces the physicality of the signal, as it has features (the transients) which the computer system must detect. *Alappat* also requires a transformation. The signal is transformed when it is, at a minimum "transform encod[ed.]" Therefore, the teachings of the claims, similar to those in *Arrythmia*, transform one physical thing into another physical thing, clearly making the claim statutory on these grounds alone.

Second, the claims of the current application are limited to a "transform coder," similar to the "rasterizer" in *Alappat,* which limits the claims so that they do not "wholly pre-empt" the use of the mathematical calculations in other apparatus. Thus, on this ground alone, the claims are clearly statutory.

Third, the teachings of the claims result in "a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan." MPEP § 2106(IV)(B)(2)(b). The transformation as taught in the claims improves pre-echo avoidance and provides a mechanism for graceful quality degradation for a given bit-rate setting. [*See* Specification, page 5, lines 18-21.] For this reason, also, the claims are statutory.

Thus, at least for these reasons, Applicants respectfully submit that Claims 10, 11, 13, 14, 15, 19, 27, 34, and 42 are directed to statutory subject matter and request that the rejection under 35 U.S.C. § 101 be withdrawn. Claim 12 depends on allowable independent claim 11, claims 16-18 depend on allowable independent claim 15, claims 20-26 depend on allowable independent claim 19, claims 28-33 depend on allowable independent claim 27, claims 35-41 depend on allowable independent claim 34, and claims 43-49 depend on allowable independent claim 42 and at least for those reasons should also be in condition for allowance.
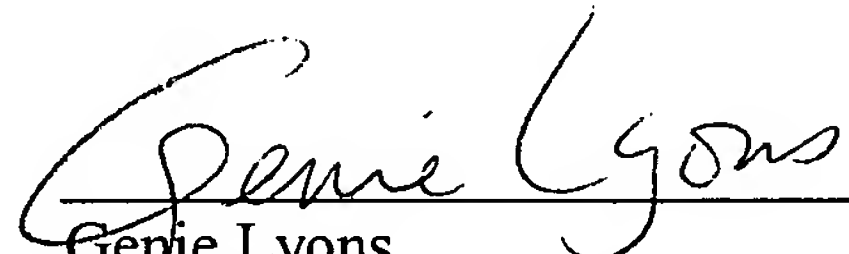
Conclusion

The application should now be in condition for allowance. Such action is respectfully

solicited.

Respectfully submitted,

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